Note on *Chiroderma villosum*, Peters, with the description of a new species of the genus; by OLDFIELD THOMAS. — British Museum (Natural History).

Among a large collection of bats sent by Herr A. Starke from St. Esteban, Venezuela, to the Museo Civico Genoa, my friend the Marquis G. Doria discovered a specimen which appeared to represent a new species of *Chiroderma* allied to *Ch. villosum*, Peters ([1]). On a further examination however it turns out that this Venezuelan specimen is the true *Ch. villosum*, and that the Minas Geraes example described in the British Museum Catalogue ([2]) is the one which must be considered as new. I propose to name it *Ch. doriae* in honour of the Marquis G. Doria, my colleague in the first examination of the question in Genoa, and a naturalist whose intimate knowledge and magnificent collection of Chiroptera are always at the service of others workers in the same field.

Different as are the skulls of *Ch. villosum* and *Ch. doriae* when laid side by side Mr. Dobson is fully to be excused for refering the latter to the former, for there is hardly one word in Peters's long description (apart from the discrepancy in size) which is incompatible with *Ch. doriae*, and I should not have hesitated for one moment in referring, as Mr. Dobson did, the Minas Geraes specimen to *Ch. villosum* had I only had the materials that he had to form a judgment upon. Fortunately however the Venezuelan specimen came to the only place out of Berlin where there is a set of Peters's unpublished plates, namely to Genoa, where a careful comparison

([1]) M. B. Ak. Berl. 1860, p. 747.
([2]) Cat. Chir. B. M. p. 534, pl. XXIX, fig. 2 (dentition) (1878).

convinced both the Marquis Doria and myself that we had before us the true *Ch. villosum*, and therefore that the specimen so well described and figured by Dobson must be new.

So far as can be made out from Peters's description, it would also appear probable that the second specimen, a skeleton, just measured and briefly referred to by him, was an example of *Ch. doriae*, but even if this were so, we should evidently have to take as the type of his species the one figured in his plate, from which also all the main part of his description was drawn up.

Both the species having been separately described, the one by Peters and the other by Dobson, and the teeth of *Ch. doriae* figured, it is only necessary to point out the differences between the two, and, apart from the greater size of *Ch. doriae*, these lie almost wholly in the shapes and relative sizes of the teeth.

	Ch. doriae.	*Ch. villosum.*
Inner upper incisor	broader, the cusp placed obliquely and meeting its fellow of the opposite side at its tip.	slender, styliform, the long simple cusp vertical, parallel to its fellow and not approaching it terminally.
Outer upper incisor	larger, nearly half the height of the inner incisor; sharply pointed, conical.	minute, barely one fourth the height of the inner incisor.
Canine both upper and lower	shorter and stouter.	longer and slenderer.
Anterior upper premolar	larger and longer, more than half the height of the posterior premolar.	smaller and shorter, less than half the height of the other premolar.
Posterior upper premolar and two molars	larger, combined length 6.0 mm.	smaller, combined length 7.4 mm.
Anterior lower premolar	with a distinct anterior cusp.	nearly flat-crowned, without a distinct cusp (1).
Posterior lower premolar, and the two molars	combined length 6.3 mm.	combined length 8.2 mm.

In external characters I can find no marked distinction except size, but it is impossible to compare satisfactorily the dried type

(1) Peters says in a foot note to his description of this tooth « An dem einen Exemplar ist die Spitze dieses Zahns ganz weggeschliffen ».

of *Ch. doriae* with the beautifully preserved spirit specimen of *Ch. villosum.*

It will be seen that the differences in the upper incisors and anterior lower premolars amply necessitate the separation of these two very distinct species from one another.

The upper incisors of *Ch. villosum*, as exemplified in the specimen before me, are especially remarkable on account of the fact that their position does not accord with that usually stated to be characteristic of the two genera *Chiroderma* and *Vampyrops*, namely « Inner upper incisors oblique », because they are perfectly straight. They really however differ equally essentially from those of *Artibeus*, which is said to have its « inner incisors straight », as in the latter these teeth are broad and have two subequal cusps, while in *Vampyrops* and *Stenoderma* the inner cusp of each tooth is much developed, and the outer aborted, the long single cusp in *Ch. villosum* being as clearly the normal inner one as is the case in *Ch. doriae* and *salvini*. The number and relative development of the cusps therefore and not merely the direction of the teeth should be used for the distinction of the genera.

In making some remarks on the genus *Vampyrops* in 1889 (1) I found it necessary to remove from *Chiroderma* into *Vampyrops* two of the species placed by Dobson in the former genus, namely « *Ch.* » *pusillum* and *bidens*. With the new form added, there are therefore only left three species of *Chiroderma*, which may be arranged as follows:

a. First lower premolar nearly flat-crowned, without a distinct cusp. Outer upper incisor about one fourth the height of the inner one.
  a' Inner upper incisors straight, not approaching each other terminally. Forearm 45-46 mm. . . . . 1. *Ch. villosum*
  b' Inner upper incisors oblique, touching at their tips. Forearm 51 mm. . . . . 2. *Ch. salvini*
b. First lower premolar with a distinct anterior cusp. Outer upper incisor about one half the height of the inner one.
  c' Inner upper incisors oblique. Forearm 53 mm.. . . . . 3. *Ch. doriae*

(1) Ann. Mag. N. H. (6) IV, p. 167.